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FRONT COVER: Ring-neck Ducks by Leland Simmons, Smithfield. This painting is in the collection of Harry Webb, Petersburg.

Editorial

BLAZE ORANGE?

Each year as hunting accident statistics begin to pour in the question is asked, "Why aren't hunters required to wear blaze orange clothing?" It sounds like a simple answer to a sticky question and therein lies its weak point. Complicated problems usually don't have simple answers.

To begin with, 51% of all accidents involve careless gun handling. Weapons that discharge under such conditions would not be influenced by blaze orange. Many of these are self inflicted and the majority happen at 10 yards or less. An additional 30% involve persons who move into the line of fire or are covered by shooters swinging on game. Blaze orange might be enough of a warning signal to cause a few of these to pull up and hold their fire, but in the excitement of the chase color is of questionable value.

Thus we are down to 19% of all accidents, about 1 in 5, in which blaze orange has a fair chance to save a life. These are the "mistaken for game" mishaps where one hunter aims at another and pulls the trigger. An average of 12 injuries and 2 fatalities of this type occur each year. Many of these involve unethical or illegal acts — shooting into dense brush at unseen movement or shooting outside legal hours. Such blatant carelessness obviously could not be entirely overcome by protective color.

But even more basic than its limited potential for saving life and limb, making blaze orange mandatory removes the responsibility from the shooter and places it on the victim. If you are not wearing your blaze orange it becomes your fault you got shot, not the fault of the trigger happy slob who shot you. Courts have called it contributory negligence. It seems a little unfair.

Blaze orange is excellent insurance and the Game Commission is in no way belittling its value. All smart hunters wear it, but a law that makes good sense mandatory can have its drawbacks in court. If the courts would expect shooters to exhibit equally good sense it might work. —HLG

Letters

TAKE PRIDE

Hunting does not mean riding around in cars or trucks and telling your buddy over the radio which way the deer are running and then driving like a fool to head the deer off and shoot him.

So hunters get with it. Leave your cars and trucks parked. Walk into the woods. Make sure of your target before you shoot. Never hunt without the landowners' permission. Obey all hunting laws. Make Virginia proud of its hunters.

James E. Cobbs
Howardsville

BREAKER-ONE

I believe your October editorial on CB s accurately reflects public opinion --both among non-hunters and among many avid hunters such as myself.

I personally believe that all hunters have responsibility for effecting improvement of their image. CBs are hurting that image. The Commission should not shirk its responsibility in this matter. Why not prohibit use of CBs for hunting and give enforcement a try? Chances are good that most hunters will voluntarily comply. The remaining individuals are not true hunters.

John Gunner
Reston

Martin R. Murk, a commercial artist from Greendale, Wisconsin, was the winner in the recently concluded annual Duck Stamp Art Contest sponsored by the Interior Department's Fish and Wildlife Service. Murk's drawing of a pair of Ross' Geese won top honors from the more than 200 entries which were received since the contest opened in July.

The winning painting, which is the third to be entered by Murk in as many years, will be reproduced on the 1977-78 Migratory Bird Hunting and Conservation Stamp. The stamp, which was first issued in 1934, is a required purchase for anyone over the age of 16 years who hunts migratory waterfowl. Revenue from the sale of the stamp (except for the cost of printing and handling) is used for the acquisition of migratory bird habitat.

MENU FOR MANAGEMENT

Regarding Clark's question about fescue and rabbit, I conducted a simple experiment by feeding domestic rabbits fescue hay during the winter months. When spring came the rabbits fed fescue did not reproduce.

Over the past several years, I have observed fields on a large military reservation planted with a pasture mixture containing 10 percent fescue. Within 5 years from the date of planting these fields were almost 100 percent fescue. This is attributed to three factors: (1) Fescue takes over by crowding out other plants in the area; (2) An over-population of deer heavily grazed the clover and vetch in the wildlife food patches severely damaging these palatable plants; but deer did not touch the fescue--thus permitting the fescue alone to form seed heads and reseed itself; (3) Mowing of these fields after they were planted with pasture mixture permitted the fescue to spread through the root system while killing the other plants.

Rabbits, quails or even field mice can rarely be found in a field after fescue has become fully established. In areas where 100 deer could be counted before fescue was planted now a single deer is rarely seen.

Edwin R. Riley
Williamsburg

Ann C. Dohoney

A Night Full of Coons

By JAMES T. MYERS

When we came stomping through the brush Castro, Ted Anderson's big Red-Bone, was standing on his hind legs and clawing at the tree and laying it on loud enough to bust his lungs. Collar was chewing at the trunk and doing his best to bay through a mouth full of splinters. The rest of the dogs were treeing all around the big oak and raising more cain than most of them were worth.

"Shoot, Ted!" I said, pausing to catch my breath. "This looks like it's going to be easy. The way y'all been talking I thought it would be a lot tougher than this."

"Well, this ain't all there is to coon hunting, Jim. We've been real lucky so far tonight," he answered with a funny little grin.

"It couldn't be too tough," I said, "this is the third one we've treed and I ain't hardly got my clothes dirty yet."

"Somebody shine a light up in the tree before we bore that poor critter plumb to death. I reckon if he's as tired of listening to y'all as I am he ain't apt to hang around much longer."

When we located the coon in the top of the big oak tree Franklin put on his climbers and went up after it. It looked real easy the way he wrestled that coon into his burlap sack. I figured when it came time for me to go up I'd show them hillbillies something about this little game of theirs.

For those of you who've never been coon hunting I'll tell you right now, you really have to know a little something to catch them devils. Sometimes the littler you know the better off you are. My biggest trouble was something that kept getting in my way — my mouth. I started by telling everybody that I didn't think there was a coon in those woods that could outsmart me. Now when you're as dumb and scrawny as I am you don't go talking like that or you just get yourself into trouble.

In a few minutes we were easing along behind the dogs in the light of a full April moon. Coons were as thick as flies and had been doing a lot of crop damage for several years so farmers were more than happy to let us go after them anytime and anyplace.

It was only a short while before the dogs lit out after another ringtail and headed him through the swamp. They treed it a few minutes later in a tall scrawny pine that looked like it wouldn't hold any of us. It was too little to climb and too big to shake him out of. We were standing around jabbering about how we could get him out when I remembered the pistol I had brought along for snakes. There it was hanging in its little-old holster and I'd completely forgotten it.

"Maybe I could get him out with a grazing shot," I said only half aloud as I waved the barrel toward the tree. You could've heard C. W. laugh all the way into the next county. Franklin just frowned at him and took on a real serious tone. "I don't think I'd be laughing if I were you, C.W. I've seen this boy shoot and he can beat the best of them. He don't take kindly to folks laughing at him."

Now I had only been joking but Franklin saw a chance to really put me on a spot. I'm probably the world's worst with a pistol, rarely hitting anything over ten feet away. To make matters worse the poorest target a man could have is a treed coon in the middle of the night. Those beady little eyes glowing down at you make a darned poor target at best.

By this time C.W. was about to bust a gut and he was more than glad to help me make a fool of myself. He just grinned real big and handed me the flashlight. I could see I'd finally gone that one final step too far.

I grinned right back and thanked him. I shined the light into the treetop and as soon as I saw the glow of his eyes I snapped off a quick shot without bothering to take aim. (By this time I didn't have anything to lose anyway.) I couldn't believe it when he came tumbling down and hit the ground — stone dead.

C.W. swallowed kind of hard and stared slack-jawed at the dead coon.

"Doggone it," I kicked at the tree. "And I was only trying to stun him, too. I guess I'm not as good as we thought, Franklin." I grinned as I put the pistol back into the holster.

I was paranoid that one of them would ask me to do it again before the night was over but I guess they'd had just about enough of that.

The dogs were getting pretty excited by now and they didn't waste any time finding another fresh track. It wasn't thirty minutes before we had another one of them bandits in a tree. Right about here those so-called friends of mine suddenly decided that all their experience and my shooting weren't giving the poor coons half a chance. Since they were real sportsmen at heart they decided that it was time to give the coons a little edge. By the looks on their faces I could tell that all at once coon hunting was going to start getting a whole lot tougher.

I grudgingly put on the climbers and then was darn near thrown bodily up into the tree. I could see that it

was senseless to argue with those dumb hillbillies, and being just a little yellow at heart, I started up into the endless maze of branches. That darned coon had to go and pick the biggest oak in the state to climb. About halfway up the tree they yelled at me to stop and I was sure they'd had a change of heart but it wasn't so. The coon was laying out on a big limb right in front of me. (At least that was what they were yelling, I couldn't see it there myself.)

Reluctantly I crawled out onto the limb but still I saw no coon. The tree was so big I could lay right out on the limb, so I paused for a minute to catch a breath. Usually a coon will go up into the higher smaller branches, but I guess that this one had decided she'd run far enough this time.

I kept shining my light out on the limb but I couldn't seem to find her anywhere. By now there was all kinds of yelling and barking going on down below but I couldn't make anything out of it so I didn't pay much attention to it.

I finally mustered enough courage and yelled loud enough so I figured they could hear me. "That darned coon ain't up here no more, and I ain't going to be up here no longer than I can help it either. You might not like it but I'm coming down anyway."

I listened for a few seconds to see what they'd say but I still couldn't understand a word so I started back down. When I looked behind me I could see what all that yelling had been about, and it almost gave me a seizure right on the spot. I was staring eye to eye with the biggest, most ferocious old sow that ever stole an ear of corn. She was grinning and I was starting to shake and the dogs were barking and the men yelling and I was just about plumb scared to death.

From where I was lying in that moonlight she looked like she'd weigh a good sixty pounds, but even a died-in-the-wool liar like me wouldn't try to tell you that. It doesn't really matter anyway — we never did get her on the scales.

It only took one look into those beady eyes

I figured from where I was there was only one way out and that was to do a job on her. I swung that catching pole around trying to get the best shot at her that I could, only she kept one step ahead of me. I'd poke the darned thing at her and she'd kind of lean sideways just enough to keep away from it. I'd poke the other way and she'd lean back.

This went on for about five minutes with me yelling, "I'm coming down!" every thirty seconds, knowing all too well I wasn't about to. Even if I could have made it past her I wouldn't have made it to the ground.

I saw right there that I had gone and got myself into a real spot, brother. Everybody on the ground was yelling and cussing and beating on the tree, and she just sat there leaning and grinning, and my nerves were getting worse by the minute.

When I'd had about as much as I could take, I decided to try pushing her off the limb. Along about that time she'd had all she wanted of playing around, too. I poked the pole at her and she grabbed it in them ferocious looking jaws and started eating her way to me. I got the idea that it wasn't my day.

I figured I better do something quick so I began to shake the stick with everything I had, which wasn't very much by then. She chomped down on that stick like she wasn't ever going to let go and just rolled off the limb. True to form I didn't have enough sense to let go. I guess that old girl must've had a right good judge of intelligence, because she could see right off that I didn't have none to speak of.

"And everything busted loose at once"

Me and her lit smack dab in the middle of them yowling hounds and everything busted loose at once. Dirt and leaves were flying around and I was at the bottom of the whole mess. I was trying to fight off the dogs and the dogs were fighting each other and she was fighting everybody and looked like she was the only one winning. You never heard such a hullabaloo in all your natural born days. The biting and growling and cussing was enough to deafen a man.

Those hillbillies didn't help matters much either. They'd pull one dog off and three more would pile back on. From the bottom of the pile it looked like there must've been a hundred of those worthless hounds. They must've been right badly confused because one of them big Red-Bones grabbed me by the collar and drug me about thirty yards into a nice cold creek. I didn't really mind getting dragged into the creek, it seemed to be a good way out of the fight, but that crazy hound dropped me there and went back after the coon.

But momma coon was too tough for them hounds. When she finished with them they weren't able to scratch their own fleas. She'd run off all the other coons in the woods to boot so there wasn't much to do but pack it on home.

It was a mighty long time before this old country boy went back into those woods. Of course I don't want you to think I blame it on the coon, she didn't start it anyway.

White-tail Safari

By BILL THOMAS

In September 1975 I saw on my "Virginia Wildlife" issue the theme for National Hunting and Fishing Day — "Put an Indoorsmen in your Shoes." A few days later a Fairfax County Park Authority naturalist friend of mine, Jim Banton, decided to put me in his shoes on his parents' farm in Albemarle County.

As a biology teacher in Suburban Fairfax County I have always taught the benefits of hunting to high school students. Working seasonably as a naturalist for FCPA I explain hunting frequently to all groups. I have even taught a night class in wildlife management — without having hunted myself.

My anticipation grew as deer season approached. I went through my back issues of "Virginia Wildlife" getting some hints from you wise old hunters. Most hunters wanted to know where I was hunting so they could go somewhere else. Having target practiced off and on for years, attended safety demonstrations, and frequently watched deer in the woods, I felt sure I wouldn't shoot at anything except a deer.

The Prince William County Gun Club of Occoquan, Virginia annually holds a "sighting in." The two weekends before deer season begins, they open their shooting range in Dale City to the public. Another big game novice and teacher, John Dieringer, and I took our rifles both weekends to sight in. John was on his high school rifle team years earlier, and has hunted small game with a shotgun. He, as well as I, learned a lot from these "pros." The gun club members have one 30-yard target and six targets at 100 yards. Hidden in the woods, they have a running deer (a cardboard deer on ropes with a bicycle wheel and a pully). They are safety conscious, and nobody shoots without an instructor's permission. As I sighted in for my first shot, wobbling up and down like a duck on dry land, the instructor couldn't believe his eyes (his description was a little different). After some help I steadied up and shot well enough to score a hit every time. I learned something else also — don't shoot a 30-06 rifle without some padding. Even with Ben Gay, my shoulder was sore for two days.

Camping out in the cold of winter was something not to look forward to. Although I have camped out in all seasons for the past 15 years, I have never had to plan for a deer hunt. I took the usual gear, then added our guns, shells, blaze vests and hats, rope, ice coolers, butcher knives, saws, freezer paper and an article "How to Butcher a Deer" from the November 1974 "Virginia Wildlife." We didn't know if the weather would be cold enough to bring the deer home, or if we would have to butcher it there. The only thing we were sure of was we were going to kill a deer.

The big day came and we drove to Albemarle County. Jim met us and we set up camp. That day, the fourth day of the season, two bucks were taken by Jim's hunting party — both in an open field less than 300 yards from our camp. Jim told us of all the signs he had seen nearby. There were fresh tracks, scrapings, rubs on trees and trails everywhere.

We woke to have our sausage and eggs and listened to the wind and rain trying to tear our tent apart. The rain let up so we loaded our rifles and headed for our tree stands. Jim took the stand overlooking the field where the bucks were taken. John climbed a hollow to work a ridge. I walked up a fire break to a stand that overlooked a mixed hardwood and softwood forest. For the next five hours it rained, with me climbing up and down the tree looking for a place to keep dry. I did find scrapings and an area in which deer fed. But, I did not see one deer. With all the shots and the barking dogs over the ridge, maybe Jim or John were luckier. I met them at camp, but they didn't see a thing either.

That afternoon Jim and I covered other areas of the 1,000 acre farm and woods. I sat on the branch of a tree after finding a well-used trail. Off to my left a field extended for 400 yards. With an hour to go before dark, my hopes lessened as a hunting dog settled down to eat the remains of a dead groundhog. With that dog there, a deer would have to be blind to walk past me. As I went back to camp swearing, I found I didn't have it so bad. John sat in his stand for three hours with eight deer-hounds in the field below eating deer guts. It seems the dogs were released that morning or the day before somewhere in the county, and kept on walking. If the owner is still in the area, and finds them, his dogs will be as healthy as when he lost them.

The next morning we drove to another pine forest. Surely in this undisturbed area we would find a buck. John hunted on the powerline right of way, along the creek, and I in thick pines. We heard shots all around us, dogs barking across the road and saw two or three hunters on our private land. Somebody must have killed a deer, but we still had not seen any. I began wondering why I left suburban Fairfax County, where I saw deer the past week.

Our last afternoon on Saturday we climbed a hill at two thirty to get an early start. The owners had seen five or six deer Friday night on the hill, so we still were hoping. After walking for an hour I sat in a tree overlooking a laurel thicket where the deer signs were numerous. The forest floor was noisy with juncos, thrashers, and wrens in the leaves. Above me I could see chickadees, nuthatches, and a downy woodpecker. As darkness approached I listened for deer coming through the leaves. And then, I heard Jim calling me back.

I learned a lot on the trip and my spirit is still high. Although the deer weren't there this time, maybe next time they will be. When I asked the owners where a good place to hunt his deer was, he gave me this country reasoning answer "Any place is a good place, if a deer walks by." Next time I hunt I'll be at that place.

Since this trip, I took five others in four counties and two states, and only shot once. My students did bring in 5 hides, which I have tanned and more are on the way.

Robert Clontz

Robert Clontz has been intrigued by the outdoors and its wildlife since childhood. Since moving to southeastern Virginia as a boy he has observed with fascination the area's abundance of waterfowl. Being an avid hunter he has experienced weather conditions, flight patterns of waterfowl and the varying moods and captivating beauty of a salt marsh. Four years ago he began to paint the scenes and conditions typical to the waterfowler. Unencumbered by the technicalities of formal art training his paintings reflect both the simplicities of the coastal marsh and the complexities of the behavior of waterfowl. His works are included in private and corporate collections throughout the eastern seaboard. He resides with his wife, Carol, and two sons in the country near Smithfield, Va. Information on paintings may be obtained by writing the artist at: RFD 2, Box 207, Smithfield, VA 23430 — Phone (804) 357-4747.

Top: Wigeon; Right: Canada Geese

These lovely paintings by Robert Clontz depict Virginia waterfowl in their coastal marsh habitat.

Right: Black ducks; Far Right: Mallards; Below: Canvasbacks

STARLINGS!

Imported in 1890, the starling has become a well-known pest. A messy housekeeper, the starling can carry disease.

By FRANK F. HANENKRAT

The setting sun is a red wafer beneath a clear November sky. Near Lynchburg, Virginia, I don boots and a weatherproof poncho and walk cautiously into a stand of half-grown pines, and into a blizzard. It is a blizzard of birds, a continuous stream of hundreds of thousands of dark birds descending out of the sky on fluttering wings. I am entering a communal blackbird roost; most of the birds are starlings, and the rest are grackles, red-winged blackbirds, and cowbirds. Later, in December, Mrs. Myriam P. Moore of Lynchburg will study the roost site for a period of weeks, and, using various measuring and statistical techniques, will estimate the number of birds to be approximately 961,400, with the starlings numbering about one-half of the total.

The roost is small by comparison to some which have contained an estimated 7 to 10 million birds. But even so, to walk into it is to enter a bizarre, surrealistic region. The stench of the birds' droppings rises from the ground, where all of these birds have deposited their nightly excreta for weeks. The dusky atmosphere among the pines is filled with an unforgettable din. It is a waterfall of sound, the sounds of shrieks and chatter and flapping wings, sounds that cascade down from every tree until the volume seems almost thunderous. On practically every limb more than halfway up every tree, birds flutter and squawk and skirmish for choice roosting sites. With the aid of a flashlight I find, in the gloom, the corpses of dead birds on the ground, birds who died from natural or unnatural causes. It is not a pleasant or healthy place.

When blackbird roosts are in the countryside, as this one was, they create relatively little disturbance to humans. But when the birds decide to roost in urban areas or near airports, they create havoc. City dwellers complain of the foul droppings, the stench, the noise, and the health hazard created by a wind-

borne organism that may multiply in starling droppings; in humans it causes histoplasmosis, a turberculosis-like disease. When the flocks congregate near jet runways, the birds can be sucked into the jet engines, causing the engines to stall and the plane to crash. Exactly such an accident occurred at the Boston airport on October 6, 1960, at 5:40 p.m., when 62 passengers were killed. The engines of the downed plane, when examined, were clogged with the feathers and bodies of starlings.

There must surely be a lesson in the history of the starling in this country. It is an introduced--an unwisely introduced--species. One Eugene Scheifflin released 80 of the birds in New York's Central Park on March 6, 1890. He was a member of the misguided Acclimatization Society, and his peculiar purpose was to introduce into America all of the birds mentioned by Shakespeare. On April 25, 1891, he released 40 more. And the cages from which he released them proved to be Pandora's boxes. By 1918, the advance line of the invading starlings ran from Ohio to Alabama; in 1926, from Illinois to Texas; in 1941, from Idaho to New Mexico; and in 1946, the birds swarmed into California and up into Canada. Today, starlings are possibly the most numerous birds in the United States.

It did not take Americans long to recognize the mistake of introducing the species, but by then, of course, it was already too late. Starlings are cavitynesters, and one of the most aggressive of all perching birds. They systematically rout native cavitynesters and destroy their eggs, appropriating the nest sites for themselves. The most frequent victims are flickers, red-headed and other species of woodpeckers, bluebirds, wrens, tree swallows, martins, and a few other species, most of whom are beneficial insect-eaters that migrate south for the winter. But starlings do not migrate in the same sense, and preempt as many nest cavities as they can find before the migratory

cavity-nesters return in the spring. Some victimized species, such as the woodpeckers, can survive by making new nest sites in woodland areas, where starlings seldom venture; but others, such as the eastern bluebirds, who require nesting sites near open fields, have been drastically reduced in numbers. In fact, bluebirds probably now need help from man in the form of starling-proof nesting boxes if they are to maintain desirable numbers.

Starlings thrive because they are intelligent, hardy, aggressive, and adaptable. They also thrive because our urban culture provides them with a nearly perfect habitat. Originally birds of the close-cropped sheep pastures of England, they find almost ideal foraging areas in the plentiful acres of well-clipped grass in surburban lawns, industrial parks, highway median strips and shoulders, and farmlands near the edges of cities. They also have learned that there is abundant food to be found at city dumps and at household bird feeders. Because they so strongly prefer these man-made areas, starling populations tend to coincide with human populations in cities and towns.

Starlings are extremely social in their behavior, and in the fall when the nesting season is over, they begin to gather in loose flocks. As winter approaches, the entire population in an area may drift together into a single roosting site which is used each night. Every morning, small flocks radiate out of preferred feeding areas in the suburbs. There they feed on seeds, insects, grubs, worms, and just about anything that's edible.

Roost sites sometimes occur within municipalities--often in residential sections with suitable roost trees, but sometimes in a downtown site where the birds roost on buildings. There they find protection from wind, rain, and snow; and usually they enjoy a few extra degrees of warmth from the heated buildings. When starlings choose such nest sites, they are necessarily conspicuous and receive a great deal of publicity. The difficulties in attempting to shoo the birds away are well known. No harmless yet effective method has been discovered, though just about everything has been tried. Loud noises; flashing lights; fake predators; chemical, electrical, and physical barriers; and trapping, are just a few of the unsuccessful methods. So far the most effective method seems to be the use of Tergitol, a detergent substance that is sprayed on the roosting birds from an airplane; it destroys the insulating qualities of the birds' plumage, and, if the weather cooperates by providing rain and low temperatures, the birds then freeze to death. The use of Tergitol is controversial, however, and is by no means the ultimate solution to starling roosts. One problem is that it also destroys harmless species who may roost with starlings.

Starlings prefer high-density population centers (which create problems of food supply and waste disposal); they prefer areas that are cultivated and controlled rather than natural; they are adaptable to a wide range of living conditions, and have an inordinately high reproductive rate. They also have Old World origins, and have swarmed over the Western hemisphere with disruptive effects on the native eco-system. In these respects, they strongly resemble another irruptive species--*hemo sapiens.* It is sobering to contemplate that the small, black bird with shirring wings, whom nobody seems to like very much, actually mirrors many of our own characteristics.

Common grackle, brown-headed cowbird and red-winged blackbird; three species that locally roost with starlings. Most people consider these native birds to be pests too, but none is so troublesome or nearly so irruptive as the starling.

DEER DEATH CAUSE CONFIRMED. Dr. Fred W. Rea, Chief Pathologist for the Department of Agriculture and Commerce's Division of Animal Health and Dairies, reported that laboratory tests have confirmed that Hemorrhagic Disease (HD) of white-tailed deer has caused the death of more than 50 deer in Dinwiddie and Nottoway counties during the latter part of September and the first three weeks of October. Lab tests have confirmed the disease in two deer, one from Dinwiddie County, and the other from Nottoway County. The first deer, a 10-point buck, was found standing in shallow water of Lake Chesdin. (The disease causes a high fever which often results in the animal's seeking water.) The second deer was found and taken to the laboratory by Fort Pickett wildlife personnel. Deer hunters are requested by the Commission of Game and Inland Fisheries to report deer carcasses to the county game wardens for mapping and to assist in determining the scale of the die-off. Early cold weather, bringing first frosts to portions of Virginia on October 11 with frosts throughout the state during the third week of October, are credited with causing the abrupt halt of the outbreak. Biting midges (gnats) which are needed to spread the virus are killed by frost. The cold October weather, coupled with the drought during the summer of 1976, kept the outbreak to the short period of late September to mid-October. HD does not constitute a health threat to man. It is most commonly found in areas where deer are over-populated. The disease die-off is another example of nature's way of reducing over-populated wild animal populations if man's legal harvest does not adequately accomplish the task. Hemorrhagic Disease is an acute, infectious, often fatal viral disease of ruminants. The disease is not new to Virginia's deer herds. It was diagnosed in a die-off in 1974 and 1971, and was believed to have been the cause of deer mortality in eastern Virginia in 1962, as well as the mysterious Disease X which caused deer die-offs in the southeast in the 40's and 50's.

SUSTAINED YIELD OF STARLINGS? The U.S. Fish and Wildlife Service has announced a policy for controlling starlings that would prevent anyone reducing the national population of that exotic and destructive bird by more than 10 percent, according to the Wildlife Management Institute. The policy, in effect, appears to prevent any significant reduction in the number of an alien species that plays havoc with native birds. It seems that starlings will be managed henceforth on a sustained yield basis. The Service apparently was daunted into issuing the strange policy with a lawsuit filed last year by the Society of Animal Rights. No one knows what effect the policy will have on starling populations, native blackbirds or other avian species. A yearly 10 percent reduction in starling numbers could stimulate an increase in the population through increased survival of the young. In any event, the eastern bluebird, woodpeckers, and other native species can be assured of an indefinite supply of antagonists.

Sportsmen

By JOHN C. HENDEE

Is there room for both on

The primary objectives of the Wildlife Refuge System are protecting and perpetuating migratory waterfowl as subjects of hunting and objects of great public interest, preserving rare and endangered species and providing public hunting. But, in addition, Wildlife Refuges are suggested as important considerations for outdoor recreation playgrounds and as comprehensive wildlife and natural ecosystems displays.

In a study of 2,500 recreationists, attitude scores for hunters and fishermen indicated that they were much less inclined to be preservation oriented than other outdoor recreationists and were more likely to hold utilitarian perspectives. "Appreciative" or purist interests, on the other hand, view the natural environment as an object of appreciation. Of course, the issue is not clear cut, since many hunters are appreciative and some purists hunt. But, as a generalization, the conflicting perspectives of purists and hunters appear valid.

The established framework pits recreation based on appreciation of the natural environment against consumptive forms of recreation, such as hunting and fishing. Appreciative uses include primitive camping, hiking, photography, nature study and interpretation, vicarious enjoyment of the resource through communication media, and scientific research. Many of them are not in total conflict with hunting and fishing. Providing for one use does not always preclude the other. But all are incompatible to some

Sportsmen who helped fund the Federal Refuge system through purchase of Migratory Bird Stamps want to reap the recreational benefits these areas can offer.

Nature Lovers

ɔur National Wildlife Refuges?

extent, if only in the minds of users. Bird watchers don't like to see birds hunted. And, whereas wildlife can only be shot once with a gun, it can be shot many times with a camera. Future competition between appreciative and consumptive uses of wildlife refuges will become more intense and trade-offs will be increasingly necessary.

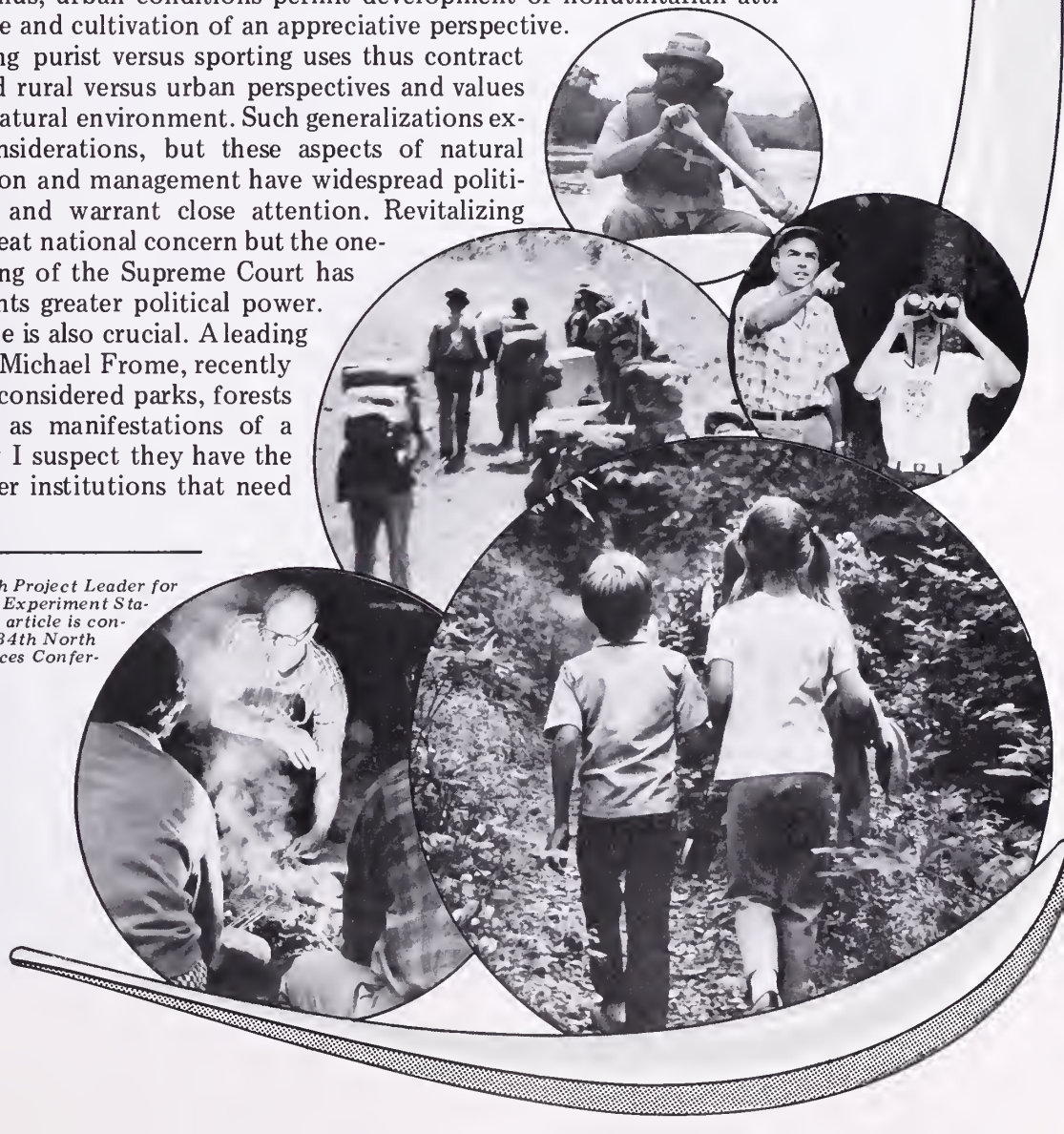
One distinguishing characteristic of hunters and fishermen is their rural background. Our study indicated that seventy-five percent of recreationists who hunted or fished were raised in small towns or rural areas. Several other studies from many parts of the country confirm the rural cultural background of these sportsmen. The rural bias of hunters and fishermen is particularly significant since studies also show that outdoor recreationists preferring appreciative forms of recreation tend to be urban bred and to reside in urban areas.

The respective rural versus urban backgrounds of hunters and fishermen and appreciative recreationists seem basic to preferences for these different forms of natural environment use. The urban way of life is not tied to utilization of natural resources the way rural occupations are. Thus, urban conditions permit development of nonutilitarian attitudes toward nature and cultivation of an appreciative perspective.

Decisions pitting purist versus sporting uses thus contract social classes and rural versus urban perspectives and values concerning the natural environment. Such generalizations exclude many considerations, but these aspects of natural resource allocation and management have widespread political implications and warrant close attention. Revitalizing rural areas is of great national concern but the one-man, one-vote ruling of the Supreme Court has given urban residents greater political power.

The social class issue is also crucial. A leading conservation writer, Michael Frome, recently wrote "I have always considered parks, forests and Wildlife Refuge as manifestations of a living democracy. Now I suspect they have the same weaknesses as other institutions that need new directions."

John C. Hendee is Recreation Research Project Leader for the Pacific Northwest Forest & Range Experiment Station, USDA, Seattle, Washington. This article is condensed from a paper presented at the 34th North American Wildlife and Natural Resources Conference, Washington D.C. 1969.



Nature enthusiasts have taken to federal refuges in droves and often view the consumptive hunter or fisherman as a threat to their continued enjoyment of wildlife.

Appreciation of outdoor resources that is learned during childhood is reflected in later life use of natural resources.

Tangible Benefits. The recreation experience is a commodity characterized by (1) immediate enjoyment (pleasure incurred before, during and after participation; (2) long-term physical and psychological benefits to participants (strong bodies and healthy minds); (3) long-term benefits to the Nation (happy, more productive citizens). Following are some of the intangible benefits and values attributed to hunting and appreciative recreation.

One authority reports the value of hunting as being an "agent of awareness," it confirms man's "continuity with the life of animal populations." Leopold stressed "cultural values in . . . experiences that renew contact with wild things" (such as hunting) and cited a "split rail value" from reenactment of earlier history, value from confrontation with the soil-plant-animal-man food chain, and values arising from exercise of the ethical constraints collectively called sportsmanship. Some critics indicate that killing for pleasure is a despicable way of recreating oneself, but in defense of hunting one can stress its instinctive basis and character building aspects, and add that killing is really a subordinate part of the experience for the true sportsman. Another researcher found "no blame in the hunter (for killing) as long as his conscience, ruled by respect for nature, governs his action."

Writing on the subject thus indicates little definitive information about the intangible benefits of hunting, but reveals extensive speculation and some defensive reactions to hunting's persistent critics.

The intangible benefits ascribed to appreciative (and other) types of recreation are equally descriptive and lack support by empirical data. The greatest insights into the intangible benefits of appreciative recreation relate to wilderness use where emotional aspects of the experience are thought to be the most extreme. The general conclusions seem to be that wilderness visits are primarily motivated by desire to escape from the artificiality of civilized surroundings into natural settings where the necessity for primitive means of existence results in various (but undefined) emotional benefits to the participant. One psychiatrist suggests that the value of wilderness trips is in the simplified role playing, reduced status seeking, and interpersonal competition during such an experience. One scientist concludes that "People who enjoy it . . . attain a sense of rejuvenation. . . Commonly, they return with increased vigor, more optimism, and greater tolerance." While outdoor recreation does provide benefits to physical and mental health this cannot be proven — the value of recreation to physical and mental health is based on faith, not on evidence.

Available knowledge on the intangible benefits of different types of recreation is thus of little help to resource managers trying to evaluate the social consequences of alternative resource uses. More is needed than just knowing that recreation is good or that it is a medium for satisfying subtle human needs. We have no basis for knowing how important recreation is or if some types of recreation are better than others.

Unfortunately, studies of intangible or external benefits of recreation are virtually nonexistent although there has been widespread speculation, usually in the form of arguments for specific uses by deeply committed clientele.

Rigorous research is needed to provide some clues to the relative value of alternative and conflicting types of recreation that might be provided.

Increase In Different Types Of Use. One important criterion for determining the highest values to which Wildlife Refuges might be devoted is the relative social preference for alternative uses.

In the last fifteen years, the Bureau of Outdoor Recreation has found a 57% increase in walking for pleasure, a 35% increase in camping, a 26% increase in hiking and sightseeing, and an 8% increase in nature study.

Hunting as a form of recreation is decreasing, according to studies based on purchase of licenses. The figures already available indicate not only a proportional decrease in hunting but a decrease significantly correlated with population growth."

This trend is not surprising since hunting seems based on cultural values rural in origin. Migration to urban centers precludes the way of life generating hunting as an expression of values and reduced the opportunity for youth to be introduced to the sport early in life.

On the other hand, appreciative types of recreation seem likely to increase. Primitive forms of outdoor recreation, such as wilderness camping, are increasing at much faster rates than the more domesticated version of such activity — car camping. Much of the dramatic increase in recreation use of the National Parks, and recent successful passage of legislation to create more parks and wilderness, is evidence of increasing awareness and concern of American society for natural environment areas.

Competition between appreciative and consumptive uses of Wildlife Refuges will greatly increase in the years ahead. In the meantime, policy decisions affecting appreciative and consumptive recreation uses must be based, among other things, on who will benefit and knowledge of participation trends.

PURPLE FINCH

There's a Red Headed Sparrow

By MRS. CARL E. JONSON

"There's a red-headed sparrow!"--yelled my son's friend, his mouth full of peanut butter sandwich. We were eating lunch in front of our dining room window, watching the antics at the bird feeder. A sudden shaft of sunlight turned the brick-colored crown of one of the birds into a glowing red --and produced the startled cry from our guest. We hastened to inform the unenlightened fellow that what he was seeing was really a house finch.

I must admit that we were not always so knowledgeable. When we first noticed Mrs. House Finch some years ago, we assumed that she was just one more sparrow. There was nothing distinguished about her drab, grayish-brown coat, nor did her slender shape and strong bill seem significant.

Mr. House Finch, though, did interest us. With his red crown and breast, he was an attractive addition to our feeder. And when he flew, there was a bright flash of red on his rump. We looked in the few bird books on hand and wondered if he were possibly a purple finch or perhaps a red poll. Neither seemed quite right, so I telephoned the local Audubon Society and thereby learned that our mysterious friend was a house finch, fairly common in this area.

We felt that the puzzle was not completely solved, however, as most bird guides listed the house finch as a western bird. Then an article appeared in *Ranger Rick's Nature Magazine* which cleared up the matter. As I remember it, a pet store on Long Island had illegally imported house finch from the west coast. Hearing that game inspectors were about to visit the store, the owners released the birds. Surprisingly, the finch not only survived New York winters but began multiplying.

If the number of house finch that visit our Northern Virginia yard is indicative, these birds are thriving here. For hours every day, a dozen or two divide their time between perching picturesquely in our crepe myrtle and descending in droves on the feeder. They consume quantities of sunflower seeds, which - to discourage starlings - is the only feed we put out. As nonchalantly as cardinals, the finch crack open the large hulls and gulp down the kernels. This is usually done during interludes in what looks like a game of "musical chairs"; four or five birds flap their wings and hop around and around the feeder, chirping and jockeying for position.

How much duller the winter scene would be without this clan of colorful, energetic finch!

Primitive Weapons:

A Modern Challenge

By BILL WEEKES

Why have special seasons or hunts for primitive gun hunters? Don't they get enough time to use their antiquated replicas during the regular open season when modern gun nimrods also take to the field? Some feel such special seasons or hunts are superfluous. By this attitude they intimate that primitive gun hunting doesn't offer anything "special" for the hunter.

But the "black powder boys" can give a disbeliever plenty of reasons why their brand of sport is singular. The reasons include greater challenge, historical significance, greater quality hunter opportunity, more hours of recreation, less expense, and more humane weaponry for the game target.

The most obvious aspect of this greater challenge in primitive gun hunting is the fact that the sportsman has only one quick shot. "Few men with a muzzle loader are going to shoot into a bush to see what comes running out," said one hunter. "I have never heard of anyone being accidently shot with a muzzle loader because this type of hunter has to be so careful with his first shot that he must know what he's shooting at."

Many hunters refer to the preparation of their replica weapons as a "labor of love." "It is a very personal sport which allows a man to take up very basic tools and build a system very uniquely his own," stated one Tennessee hunter who visits the Old Dominion for some of his hunting. "By the very nature of his weapon, the muzzle loading hunter has put in many hours of practice and study before feeling he and his weapon are ready for the hunt."

Patience in stalking game is another part of the challenge because the effective range with a muzzle loading rifle is only about 150 yards. "With a primitive weapon," stated a Virginia hunter, "you must get a lot closer to the game. There's more stalking, more sport required."

"Black powder buffs study the history of the muzzle loaders," one hunter commented. "They do this so

they will have a more complete understanding of the guns they shoot. Also they want to know about the costumes of the periods during which these guns were originally used."

The attraction of "quality hunting" is another reason for the growing army of primitive gun nimrods. Special seasons or hunts for black powder aficionados come before the regular hunting season in most states. Also, old gun hunters are still much fewer than those who hunt with modern firearms. Because of these two facts, a special season or hunt gives primitive gunners more freedom in the field. He is not crowded out by other sportsmen.

Another dimension in primitive gun hunting is more hours of recreation (because the challenge is greater and the success lower). As Dr. Henry Mosby, professor of wildlife science at Virginia Tech and State University in Blacksburg, envisions it, the future will see more and more hunters stalking deer on less and less available land. Yet, to satisfy a growing number of hunters, more recreation hours will need to be produced. Dr. Mosby sees in the muzzle loading seasons an answer to expanded recreation time on public land.

The popularity of hunting with primitive guns blossomed several years ago, according to Don Harkrader, a gun dealer in Christiansburg. "Several years ago we didn't even carry black powder, but now of course we do — in all different granulations. Replicas of more and more old guns and the paraphernalia that goes with them, like percussion caps, powder flasks, and bullet molds, have been on the market now for some years.

The ammunition is cheaper for the muzzle loader. While a modern bullet cartridge costs 35 cents, the old gun hunter spends only about three cents per shot (about one-half cent for a piece of shot, one cent for a powder load and three-fourths of a cent for a cap).

Just how efficient are muzzle loading pieces as hunting weapons? For both types of muzzle loading rifles — flintlock and percussion — powder and shot are loaded down a barrel and packed home with a patch over a ball which is attached to the end of a ramrod. With a flintlock — which experienced its heyday in the 18th Century — powder must also be placed on a small pan near a lever. The spark from the flint hits a piece of steel or "frizzen", igniting the powder on the pan and this, in turn, ignites, through a small aperture, the powder in the barrel. The explosion in the barrel pushes out the shot. In percussion models the hammer hits a cap which sparks off the powder inside, which is protected from the elements.

"The percussion rifles are more popular," commented Harkrader, who last year sold his $1,500 Andrew Kopp original Kentucky rifle made in Pennsylvania in 1840. "They are less complicated and more accurate. With a flintlock you have to follow a moving target because you never know when the ignition outside will reach the powder inside. With the percussion you don't have the problem of breaking the flint or of getting the powder wet."

Primitive gun hunters insist to a man that their guns are as accurate as a modern piece from 125 to 150 yards if both guns have open sights. Anti-hunting persons have been led to believe that primitive guns, because they are "old", are less accurate, and therefore, less humane as a killing piece. What these critics don't realize is that most primitive gun hunters would not hunt with old originals. These guns are too valuable to risk damaging in the woods. Primitive gun buffs hunt with modern replicas of the old originals.

The Witten Fort Rifles of Tazewell County, the oldest of Virginia's primitive gun clubs, is representative of the enthusiasm of its members for their sport. Several members recounted their experiences hunting with these weapons.

"Of course, you have only one quick shot at a time," noted Ernie Hobbs of Kingsport, Tennessee. "I've shot a deer in the rain when the cap would strike and the powder would burn, but there was no explosion."

"Using a muzzle loader is altogether a different sport," stated Don Hagy of Bluefield, owner of more than 60 guns and veteran of about 15 years of caplock and flintlock shooting. "I feel if our forefathers could hunt with these types of guns, we surely should be able to. I wouldn't be afraid to face any game with a muzzle loader and it doesn't take me long to reload each time. I carry charges and patches made out in advance."

"The round ball, because it doesn't move through the air as easily as the modern bullet, means you've got to play the wind," observed Andrew J. Witten, charter member of the Witten Fort group.

Bill Boyd of Mountain Hope, many time old gun target champion of his native West Virginia, thinks muzzle loaders are more accurate at 100 yards. "One year we went to the Huntington Gun Club and they had to use peep sights on their modern guns and we beat them all three matches," he recalled.

Muzzle loading hunting is growing. Membership in the National Muzzle Loading Rifle Association has increased 50 percent in the last four years to its present 19,000. These members emanate from more than 200 charter target shooting clubs of which five are found in Virginia.

In 1973 the Old Dominion joined eleven other southeastern states in providing special seasons for the primitive gun hunters. This came about at the request of these hunters.

During the first three seasons in this program here, Virginia primitive gun hunters were allowed the exclusive use of Clinch Mountain, Gathright and Goshen-Little North Mountain Wildlife Management Areas. This year, for the first time, black powder nimrods were allowed to use in addition, the G. Richard Thompson Management Area and portions of the Jefferson National Forest.

According to data compiled by Joe Coggin of the Commission of Game and Inland Fisheries, the estimated number of hunters in 1973 was 631; in 1974, 826; and in 1975, 900. Hunter success was 3.8 percent, 5.6 percent and 3.6 percent, with 24, 46 and 32 deer harvested, respectively.

A muzzle loading gun used in Virginia must be a single shot side lock percussion weapon only (no under or center hammers), firing a single projectile loaded from the muzzle of the weapon and propelled by at least 50 grains of black powder. No telescopic sights are allowed.

In addition to Witten Fort, primitive gun clubs in Virginia include the Blue Ridge Buckskinners of Harrisonburg; the Shenandoah Long Hunters of Charlottesville; and the Turkey Creek Longrifles of Richmond.

Henry Mosby

WILDLIFE MANAGEMENT PIONEER

By BILL COCHRAN

Mr. Henry S. Mosby, a name synonymous with wildlife management in Virginia for more than 30 years, stepped down as head of the Department of Fisheries and Wildlife at Virginia Tech this year.

In 1978, Mosby will reach retirement age, and until then he prefers teaching and research to the paper shuffling duties of a department head. Dr. Gerald H. Cross, a wildlife extension specialist, succeeded Mosby.

Mosby began his career as a state wildlife biologist, working on an extensive turkey project in 1939. He has pioneered many wildlife practices. In 1947, he began teaching and conducting wildlife research at Tech. Many of his students now manage the state's wildlife resources, as employees of the Virginia Commission of Game and Inland Fisheries.

The past week, while peering over his reading glasses and tampering with his reluctant pipe, Mosby commented on a number of wildlife subjects:

The Antihunting Movement: I think the general public, in reacting to all of the violence that we see so much of in newspapers and on TV and elsewhere, is assuming that all forms of killing should be discounted or avoided.

The fact is, and I don't think even sportsmen fully realize this, you cannot stockpile wildlife. It builds up and goes down each and every year. And if man doesn't make use of a reasonable segment of it, it is going to be lost anyway.

Here on the college farm, we closely observed quail for a number of years, from October until spring. With no man-caused mortality, we found that on the average 55 per cent of the birds present in the fall disappeared from natural causes by spring.

Regardless of however we may wish it were not so, all wild animals die a violent death, one way or another. The question is whether they be quickly dispatched in a sporting way or permitted to die of starvation, disease, accidents or some other cause.

I have a whole lot of compassion for those that die a lingering death, and I'm not too certain that a quick dispatch by a hunter may not be a far more humane way. I know that most of the antihunting sentiment is emotional and I can appreciate this, but who are those who object the loudest to fish kills or deer starvation or who are those who take food out to wildlife in the wintertime? It is the hunter, not the nonhunter.

The Greatest Game Management Accomplishments: Beyond question the deer restoration program and to a lesser extent the turkey restoration programs have been the two most dramatic wildlife management accomplishments in Virginia.

In the western part of the state, prior to the mid-30s, all deer had disappeared except for one small group in Bath County with some spillover into Alleghany County. All your deer present in the mountains of Western Virginia have been re-established since 1940. The main push involved about 2,000 deer. At present, we are harvesting about 20,000 to 25,000 annually in this section of the state.

Also the turkeys were wiped out southwest of Craig County down to Lee County. The turkey has been re-established by live trapping and stocking, through forest management programs and game protection.

Squirrel Laws: The squirrel laws in Virginia defy any logical explanation. The color-coded map used to designate the many different seasons looks as if someone had given a six-year-old kid a bunch of crayons and a map of Virginia and told him to start coloring the map, using any color that came to mind.

Most of the difficulty with the squirrel laws is not the result of fuzzy thinking on the part of the State Game Commission, but is the result of laws passed by the General Assembly for some individual in a particular county who thinks his season is more desirable than another.

Some counties have had a September season for 25 years, the adjoining county has had an October season for an equal time and still others have had a November season. No one has been able to detect any overall difference in squirrel populations. Now a 25 year experiment is a reasonable period of time.

If game populations produce a removable surplus, it is good conservation to remove as large a proportion of the surplus in a recreation effort as possible, so long as we are assured that it does not adversely affect the population. The squirrel hunter can do this best in September, because that is when squirrels congregate at mast producing trees.

Now in September, a percentage of the adult females may not have completely weaned their young and that is an objection to an early season. But if you put the season off later in the fall, the possibility of harvesting a reasonable number of squirrels diminishes.

The average number of squirrels lost each year whether you hunt them or not runs between 40 and 50 per cent. Even with the early season, according to all the studies that have been made that I am aware of, you don't harvest more than about 10 to 15 per cent. The later the season, the smaller the harvest. To let natural causes remove that great a percentage just doesn't make sense. I'd recommend a Sept. 1 season.

Special Seasons: If a hunter gets his jollies out playing Robin Hood or out hunting with a muzzle loader, and he is completely satisfied with his outdoor experience, why not permit him that opportunity. We are in the recreation business.

Now statements often are made that the special seasons (bowhunting and muzzle loading) are set just for special groups. The fact is, anyone who wants can join that group. These seasons require special equipment, but don't restrict who may use that equipment.

It is a matter of making hunting a more sporting proposition and less a killing one. There is no evidence of any kind in the country that I am aware of that shows archers or muzzle loaders have had any serious impact on game species.

Fall Turkey Regulations: I was very sorry to see the fall turkey season contain regulations that require the taking of gobblers only. I don't think this is practical, because it simply isn't feasible to distinguish between a hen and a gobbler while hunting in the fall.

I think you destroy a good bit of a hunter's recreation if you put him into a position where he is afraid he is going to break a law even if he doesn't want to. If you don't have enough turkeys to justify an either-sex fall season, I would suggest just eliminating the season entirely.

Forestland Management: The brightest future of wildlife management will be in forestland game (deer, turkeys, squirrel), not farmland game (rabbits, quail).

At the present time, livestock is the best economic promise for the majority of farmers. Livestock production and wildlife production on the same area seldom works. So long as there is livestock production, with its heavy utilization of cover by grazing and hay production, you just about can count on eliminating quail and rabbits.

On the other hand, good forestry practices are compatible with wildlife management practices. I think Virginia pretty well has recognized this, and the most emphasis is placed on forest wildlife management. One of the virtues here in Virginia is the excellent cooperative agreement between the state and forest service for the management of more than one and one-half million acres of national forest land.

Exotic Game Species: The chance of finding an exotic game species that will really contribute to hunting is very remote. We've been through that, and I think most exotic introductions are going to receive a very skeptical eye from now on. The possibility of better managing native species is so much superior. The chance of committing an error with an exotic is often great.

Management of Nongame Species. In the past, 98 to 99 per cent of the wildlife management practices were strictly for game species. Game remains the most substantially supported species, but recently nonconsumptive species have been receiving greater consideration.

A number of states have attempted to raise special funds for nongame wildlife. Most state agencies derive their wildlife funds from the hunter and fisherman, and there is the feeling that this money should be spent on species that are his primary concern.

Of course, many game programs benefit nongame species. Waterfowl refuges are a typical example. They are funded by sportsmen almost entirely for waterfowl, but just look at all the other wildlife that also benefits.

You can not benefit game without benefiting nongame species. This is something sportsmen have said all along. But it can work the other way, too. Many programs specifically for nongame could benefit game.

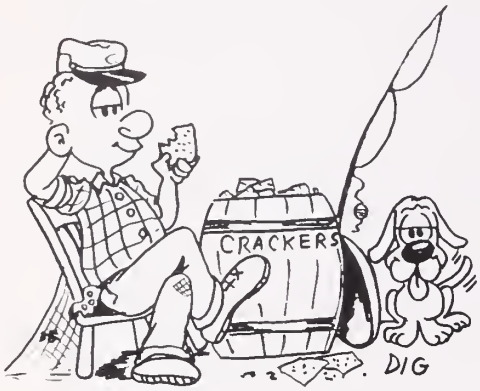
The Wild Turkey: To me it is a fascinating bird, because it can be one of the smartest creatures, then turn around and do some of the most stupid things.

I'm still looking for some of the stupid ones, but most I have encountered have been considerably smarter than I am.

IT APPEARS TO ME...

A Conglomeration of Comments, Cumshaw and Cogitation

BY CURLY



. . . A PERSON OUGHT TO HAVE ONE!

If you are truly interested in the status of endangered wildlife there is a free publication which you should be getting. Write the Department of The Interior, U. S. Fish and Wildlife Service, Endangered Species Program, Washington, D.C. 20240 and request you start receiving: "Endangered Species Technical Bulletin."

Do-it-yourselfers take note. . . . . there is now available a new brick system which will enable you to easily construct those neat backyard (or inside) building projects which you have been putting off. Mortarless and interlocking, the 4-inch and 8-inch-wide bricks come in a variety of colors. Your finished product will take you less time by about one-half, cost much less and the neighbors will probably ask for the name of your "contractor." For details contact: Zip Brick, Inc., Dept. PP, 10439 Garibaldi, St. Louis, Mo. 63131.

Winter Weather and the higher (and dryer) indoor temperatures brings about the dry house condition which not only makes living uncomfortable but often results in cracked walls and furniture and can even cause wallpaper to peel. Additionally, if you are like me, the situation actually becomes 'shocking' with every metal object a potential source of electrocution. Research Products Corporation, Madison, Wis. 53701 has a free booklet entitled *Humidification Facts* which might be the source of an answer to the problem of 'Desert Domicile'.

If you are looking for a new and different way of planning your next outing, hike, fishing trip or whatever, consider the use of aerial photography. Land use patterns are readily discernible through the use of high-altitude, quad-centered aerial photographs. Additionally, the various types of vegetation can be interpreted and even property lines are recognizable. For information on what coverage of Virginia is available and even suggestions for the use of the existing coverage (nearly 4/5 of the state has already been photographed) write to the Virginia Division of Mineral Resources, Box 3667-S, Charlottesville, Va. 22901.

For Fifty Cents and 24 cents postage, you can obtain a very interesting and educational Virginia American Revolutionary War Map. Published by the Virginia Independence Bicentennial Commission in cooperation with the Virginia Highway Department, the multi-colored map traces the routes taken in 1780-81 by Generals Rochambeau and George Washington. Also listed on the map is a chronology of Revolutionary events which are Virginia-related beginning with the defeat of the Shawnee Indians in the year 1774 to the 1781 Cornwallis defeat at Yorktown. Chances are you might have killed your last deer or turkey on what had been an Indian Fort back in those misty times. It's worth checking out. Contact the VIBC, Box 1976, Yorktown, Va. 23690.

. . . .For Your Book Shelf

These long winter nights, which are traditionally for 'catalog-ing' through the L. L. Beans, the Herter's and the multitude of similar goodies, are also the times when a good book is irreplaceable. Such a book, and one that will start your planning processes early and could cause no small amount of cabin fever is *Hiking Trails in the Mid-Atlantic States.* This little gem done by Edward B. Garvey from Falls Church, Virginia is 212 pages of detailed information and suggestions for the person who is a dyed-in-the-wool backpacker or one who just gets out occasionally. Covered in the book, in addition to suggestions that range from what to purchase (equipment-wise) to safety hints, are details including mileages of trails in Virginia, West Virginia, Pennsylvania, Maryland, Delaware and New Jersey. Costing $5.95 this valuable paperback is available from The Great Lakes Living Press, 3634 W. 216th St. Matteson, Illinois 60443.

. . . .And Then

Did you know that birds are capable of reaching some pretty respectable altitudes? According to records of the National Audubon Society the normal flight pattern is at 3,000 feet or below. However a bearded vulture was sighted at 25,000 feet over the Himalayas and a Western Airlines Electra 'collected' a mallard duck some time ago at a recorded altitude of 21,000 feet.

Rappahannock Wildlife Management Area

A classic farm fence leads sportsmen into the Rappahannock Wildlife Management Area.

By J. E. THORNTON

The Rappahannock Wildlife Management Area, consisting of approximately 3,900 acres, is the most recent in the Commission's program to provide public hunting and fishing opportunities throughout Virginia. It is particularly important because of its strategic location, being close to the heavily populated centers of Northern Virginia.

It is located in the southeast corner of Fauquier County approximately 18 miles south of Warrenton and about 7 miles from Remington on Route 651. The Commission obtained possession, for all practical purposes, in January, 1976, with one additional tract being acquired in June of 1976. So, details of the plans for the management of this wildlife unit are just now beginning to take shape, and implementation of the plan is just getting underway.

The Rappahannock Wildlife Management Unit is ideally suited for a public hunting and fishing area. About 80 percent of it is in forest land, consisting mostly of cutover mixed hardwood and scattered stands of scrub pine. The remaining portions are in cropland and grass. The wildlife found here consists of white-tailed deer, wild turkeys, grey squirrels, and an occasional ruffed grouse. Bobwhite quail and cottontail rabbits are found in fair numbers scattered throughout the crop and grass lands. The Rappahannock River, making up the southern border of the unit is one of the unique features of the unit. Fair populations of game fish in the sunfish family (small and largemouth bass, red breasted sunfish) and mixtures of rough fish provide reasonably good fishing. It is a popular river with canoeists and is considered one of the best canoeing rivers in the State. It goes through one of the most beautiful and unspoiled sections of the State; and to the dedicated canoeist, it presents scenery and vistas that are hard to match anywhere. Being a "navigable stream," it is public water and is used extensively by whitewater enthusiasts. A pond of about 4 acres just behind the main residence provides limited pond fishing (bass, bluegills).

Management of the area is being directed toward creating a diversity of food and cover and to provide protection for the wildlife found there. Fields which lend themselves to the production of agricultural crops will be planted to corn, soybeans, and small grain on a rotation basis. The fields will be worked through a leasing arrangement with local farmers, with the Commission's share of the crop being left in the field as wildlife food and cover. Some fields in the future will be managed to provide for dove shooting, while others will be managed to provide other small game habitat.

A powerline right-of-way being developed by the Virginia Electric and Power Company crosses the area for about 3 miles. It will be planted by the VEPCO

The 4¼-miles of the Rappahannock River downstream from the Kelly's Ford Bridge that pass through the Rappahannock Wildlife Management Area are prime canoeing waters.

people in accordance with recommendations proposed by the Commission to provide the maximum in the way of wildlife food. This right-of-way will provide much needed open space through the wooded portions of the unit along with additional food and cover. Additional clearings are planned for the forested areas in the form of "daylighting" many of the old logging roads and CCC fire trails found there. This will consist of pushing back the vegetation for as much as 100 feet on each side of the road, and planting to wildlife mixtures of grasses, clovers, and lespedezas.

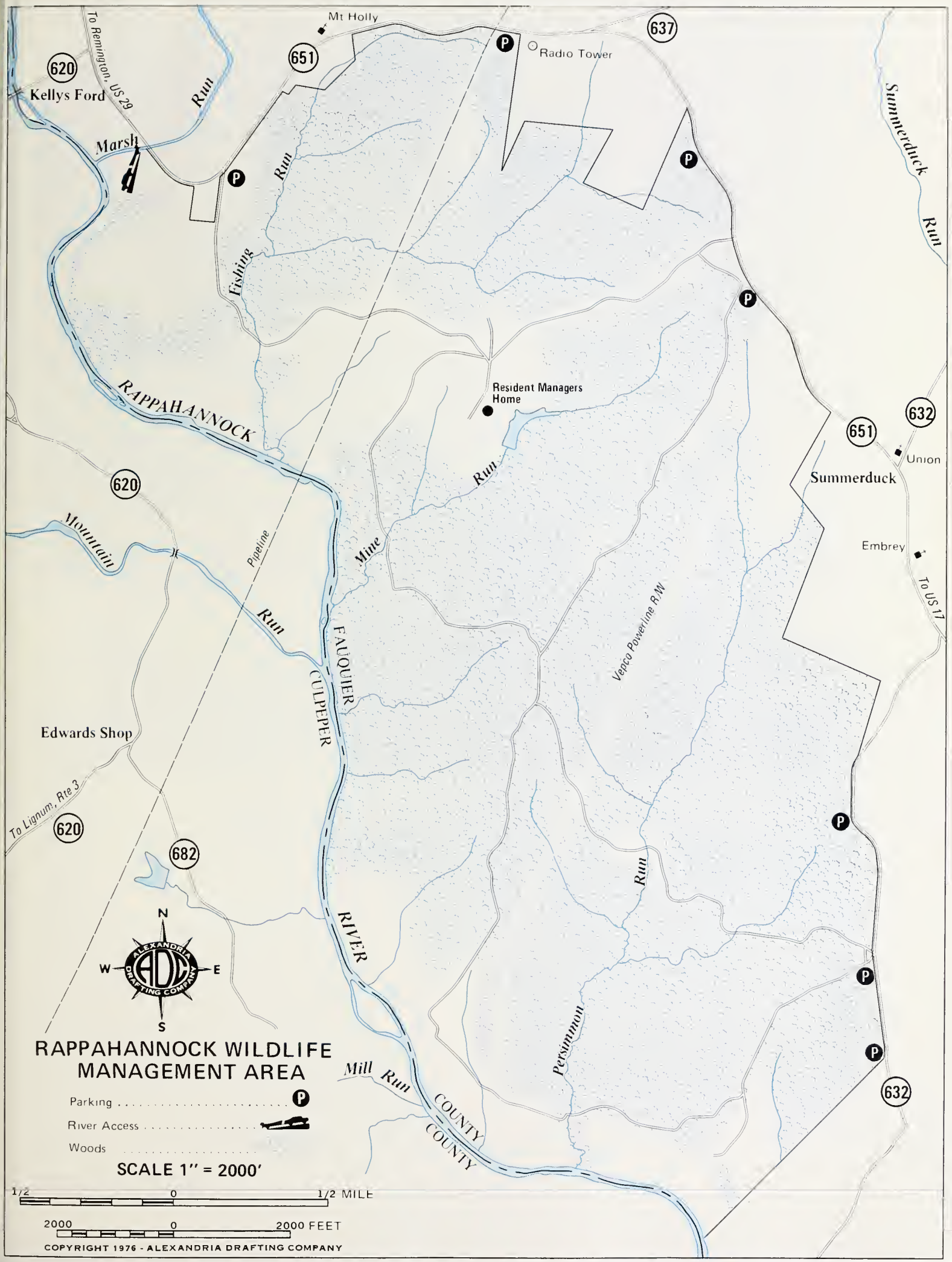
In addition to its use for public hunting and fishing, the area is proving to be a popular place for field trials, and a number of bird dog field trials have already been held. Some additional travel lanes for field trial use will be made and treated the same as other improvements, but will, in no way, interfere with the use of the area for hunting or fishing.

Due to its cutover condition, relatively little timber management will be done on the area in the near future, and then only to improve wildlife habitat. Small acreages of forest land that consist of young growth or have little timber growth will be opened up with heavy equipment and, where appropriate, burned under controlled conditions to provide additional openings for small game and browse for deer. Other areas treated in a similar manner will be planted to pine in small patches to provide cover. All such areas will be seeded to Korean lespedeza.

Access to the river will be provided on the upper end of the property in the vicinity of Marsh Run where a boat landing is to be built along with a parking lot. Eventually, a similar boat landing and parking lot will be built on the lower end of the property along with vehicular access to permit persons using the River to leave the River on the lower end of the property.

Although plans for developing the area are pretty well along, they are a long way from being fully implemented. Vehicles will not be allowed on the area itself--but parking areas will be provided at convenient locations along Route 651. These special provisions are necessary because of the heavy hunting pressure that is anticipated. Camping, as in the case of all other Commission-owned property is not permitted because of the lack of sanitary provisions and other accommodations.

The management of this newest of the new public hunting area in Northern Virginia presents a challenge in game and fish management. Its location and diversity of habitat should be a real asset to the hunters and fishermen of Virginia. At any rate the Rappahannock, along with the G. Richard Thompson and the Rapidan management units should go a long way toward meeting the demands for public outdoor recreation in the form of hunting and fishing in Northern Virginia.



RAPPAHANNOCK WILDLIFE MANAGEMENT AREA

Parking ..... P

River Access .....

Woods .....

SCALE 1" = 2000'

1/2 0 1/2 MILE

2000 0 2000 FEET

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Bird of the Month

The Barred Owl

By J. W. TAYLOR

The barred owl is author of some of the strangest sounds ever to issue from the Virginia woods. One bird can sound weird enough, but when two (or sometimes three) join in chorus, or in overlapping antiphony, the result can be downright unearthly.

Ordinarily, the call of this owl is simple enough, though always poignant, mysterious. There is a burst of deep, resonant hoots, trailing off at the end. Usually, there are eight notes, two series of four with a brief pause between. The last two run together, a strongly accented hoot rising in pitch and then sliding down the scale.

However, when the birds are under the influence--of love, territorial conflict, or perhaps merely the full moon--the sound is transformed into something uncanny. There are hisses, laughs and cackles, dog-like whelps and cat-like screams. One listener described them as demoniac ravings. When two or more are together, they try to outdo each other. Yet, there is a boisterous, mirthful quality to it all, suggesting that it's all in fun.

To hear such performances, one must venture into heavily wooded country. For, unlike the screech owl, the barred owl is no suburbanite. It likes the deep forests, be they low, wet bottomlands or high mountain ridges. In Virginia they seem equally at home in both situations, though farther south are associated chiefly with river swamps.

As is generally the case with owls, they are more often heard than seen. But, once seen, they are readily identifiable. There are no large "ear" tufts like those of the great horned, the other large owl frequent in these parts. The general coloration is chocolate brown, spotted, barred and streaked with whites and light ochres. The markings are transverse on the breast, lengthwise on the belly and flanks. Dark eyes are set in a large, rounded head.

The barred owl preys little on poultry or game. Small mammals, particularly mice, form the bulk of its diet, which also includes reptiles, amphibians and insects. Some birds are taken when other, more favored food is scarce.

Early nesters, this owl may begin courtship activity in February and have a full clutch of eggs by mid-March. The preferred nesting site is a natural cavity or hollowed tree, but they will at times appropriate old hawks' and crows' nests. One pair was seen to set up housekeeping in the nest of a grey squirrel.

What to Feed a Bird

By EMILY GREY

While most wildlife graduate students worked diligently in the field, laboratory, or classroom during the winter of 1975-76, I lounged back with my binoculars in a comfortable chair or car seat and performed the most enjoyable task of watching birds eat. Incredible as it might seem, no study to my knowledge had been conducted in the same manner as this one. The two objectives of my experiment were: to determine which kinds of seeds are preferred by which species of birds, by counting the number of birds by species at a given feeder during a specific unit of time; and to recommend a formula for bird feed mix which would yield a maximum number of bird clientele during a period of time at a minimum cost.

At each of my three study sites, two sheets of exterior plywood (4x8 feet) were elevated on posts 18 inches above the ground. Initially, 16 artificial lantern-type feeders, purchased from Rubbermaid Incorporated, Wooster, Ohio, were secured onto the plywood tables. Feeders were 2 feet apart, and each was separated by wooden strips (1x1 inch) to prevent loss of seed and mixing of seeds from adjacent feeders. White

When whole peanuts and sunflower were removed from this feeder, blue jay visits were reduced substantially.

It is not surprising that the evening grosbeak prefers sunflower. Visits dropped considerably when this foodstuff was not available.

The outstanding selection by cardinals was sunflower. When this food was removed, the cardinal dined on combine milo and to a lesser extent on hegari milo.

numbers (1-16) were painted on top and on one side of each feeder for seed identification. Each feeder was filled and maintained with a different seed type.

Two 20-minute observations were made daily at each of three study sites beginning one-half hour after sunrise. Bird use of food material was measured by recording those birds seen, by species, within the confines of the compartment of each feeder.

Sixteen varieties of seeds were tested: browntop millet, German millet, Japanese millet, pearl millet, proso millet, combine milo, hegari milo, wheat, buckwheat, oat groats, peanut hearts, whole peanuts, corn (finely cracked), rape, cracked rice and sunflower. Seeds were maintained in the feeders at all times during the experiment, giving birds constant access to food. When the seed level dropped to a reference point on a feeder, seed was added and this volume was recorded by seed types. The amount of food material remaining in the feeders was measured at the end of each week to determine the volume of food consumed and/or wasted.

Visits by red-bellied woodpeckers, white-breasted nuthatches, Carolina wrens, a brown thrasher, house finches, American goldfinches, rufous-sided towhees, and a field sparrow were relatively infrequent. However, data revealed preferences among certain species. Red-bellied woodpeckers, house finches, and rufous-sided towhees were counted most often at sunflower seeds. White-breasted nuthatches preferred whole peanuts while Carolina wrens selected mainly whole peanuts and peanut hearts.

Cost is an important consideration in selecting an individual seed type of mix. Because starlings and house sparrows utilized some foods much more than other birds, I elected to make comparisons of visits excluding these two species.

When comparing cost per pound, total visits, and visits per cost of the six mixes with the individual seed

Proso millet attracted mourning doves most readily, while combine milo was a close second.

EXPERIMENT DATA

BIRD SPECIES	FIRST CHOICE (of 16 varieties of seeds))	SECOND CHOICE (of individual seed types)	PREFERRED MIXES	COMMERCIAL MIXES
Mourning Dove	proso millet	buckwheat hegari millet	proso millet SPC*	HPW* Type I*
Chickadee Fufted titmouse	sunflower shole peanuts	showed little preference for any other type of seed		
Starling	peanut hearts	oat groats	corn	corn
House Sparrow	proso millet	German millet	proso millet HPW*	proso millet HPW*
Common Grackle	not observed during first three phases until migration into Blacksburg area during Phase IV			sunflower
Cardinal	sunflower	combine milo	sunflower	sunflower Type II*
Evening grosbeak	sunflower	no identifiable second choice	sunflower SPC*	sunflower SPC*
Purple Finch	sunflower	no identifiable second choice	sunflower	sunflower
White-crowned sparrow	German millet this species sampled a wide variety of seeds	no identifiable second choice	proso millet HCC*, SPC*, HPW*	proso millet Type II*, Type I*, SPC
White-throated sparrow	proso millet this species sampled a wide variety of seeds	pearl millet	sunflower	Type II*
Song Sparrow	proso millet German millet	proso millet German millet	proso millet German millet	SPC*

* SPC – sunflower-proso millet-corn
* SGW – sunflower-German millet-wheat
* HGC – hegari milo-German millet-corn
* HPW – hegari milo-proso millet-wheat

*Type I mix – white millet-red millet (varieties of proso millet)- cracked corn - oats - milo - sunflower

*Type II mix – white millet-red millet-sunflower-whole peanuts-peanut hearts-rice-canary seed-milo-buckwheat

types, the cost per pound of the mixes is usually less and the number of visits is higher. When comparing the number of starlings and house sparrows attracted to individual seeds and mixes, it appears that fewer of these two nuisance species were attracted to certain mixes, particularly at SPC and HGC. Perhaps it may be more economical to purchase the individual ingredients and develop a mix.

The two commercial mixes might be purchased by persons who object to buying individual ingredients. The Type I mix is available locally at the retail price. The analysis indicates, however, that the Type I mix ranked lowest among the mixes in the visits-per-cost evaluation. The Type II mix attracted a sizable number of starlings and house sparrows, but received a visits-per-cost rating nearly identical to the highest rated mix, SPC.

SPC attracted a maximum number of birds per dollar spent. It attracted 14 bird species, a greater variety of birds than the other mixes and most of the individual seed types, with the exception of sunflower, which attracted 15 species. Even though it contained proso millet, which was very attractive to house sparrows when offered alone, SPC was less appealing to house sparrows and starlings than the other mixes.

On the basis of these findings, SPC, consisting perhaps of 50 percent sunflower, 35 percent proso millet, and 15 percent finely cracked corn, might be an optimum bird seed mix for Blacksburg and the remainder of Virginia. This optimum mix might be subject to change because it is possible that other untested seed types might have equal or greater appeal to a maximum number and species of birds at a minimum cost.

Emily Grey received her Master of Science degree in Wildlife Management in 1976 from Virginia Polytechnic Institute and State University. Becoming an interpretive naturalist is her employment ambition. Nonconsumptive wildlife, writing and photography are among her primary interests, and at a later time she wishes to try teaching. Ms. Grey makes her home on Virginia's Eastern Shore in Poplar Cove.

COAL & Trout

By DENNIS ANDERSON

In a time when man seems to be destroying the earth more than improving it, there's always that spark of hope when one sees man and nature living together.

The Powell river in Southwest Virginia was, in its day, no doubt, a well balanced cold water stream. However, around the turn of the century when uncontrolled coal mining began this all but wiped out the river's delicate life system. Siltation and acidity can, in a matter of hours, ruin a river.

These early miners had little if any consideration for the Powell or those who would use it in the future. They simply saw it as a kind of garbage disposal. Everything from acid mining runoff to last week's trash was put into the Powell's tributaries. This no doubt destroyed the native brook trout population since they are very demanding in their requirements for survival. While coal was bringing "hope" to the people of this area they were killing a vital resource.

Not until as recently as 1966 were any environmental controls put on coal mining. These first laws, inacted by concerned coal companies and citizens, were very weak but laid the foundation for future laws.

The hope is seen as once again the Powell river has become suitable for trout.

The Virginia Coal Surface Mining Law has begun enforcing ecological safeguards on strip miners. Things such as sediment ponds, rocky drains, limestone treatment of acid water and quick vegetation all help to minimize the adverse effects of strip mining on the Powell river. The only problem remaining to be solved is the unrestricted mining of deep mine coal that also adversely affects the Powell.

The Virginia Commission of Game and Inland Fisheries now stocks the river annually. The majority of the fish stocked are rainbow trout, but some brook and brown are put in also. This year alone, trout were stocked in the Powell three times. Many a fisherman in Southwest Virginia, and even from Kentucky, enjoy the picturesque views and the challenge of trout fishing on the Powell river. It's an encouraging thing to see a sportsman pulling out a nice rainbow and see a coal mining operation all on the same river. Maybe there is hope.

Drumming Log

Edited by Mel White

Walter H. Cheek, of Mount Hope, West Virginia, has owned 55 consecutive out-of-state hunting licenses. Mr. Cheek is optimistic about the hunting in Virginia. As he sees it, "Be the Lord's will, we'll have a good hunt this year."

GAME COMMISSION TO PROPOSE FISH AND BOAT LAW CHANGES JANUARY 14

The Game Commission will hold a public hearing beginning at 9:30 a.m., January 14, 1977 at 4010 West Broad Street in Richmond. The main purpose will be to entertain suggestions for changes in the State fishing and boating laws. Following this regulations for the 1976-1977 fiscal year will be proposed. Recommendations for changes in hunting and trapping laws will be considered at a similar hearing February 25. Final action will also be taken on the fish and boat law proposals at this time. Persons unable to attend these meetings may submit their suggestions or comments by mail in advance.

Dr. Orby Southard, a resident of Boone, North Carolina, bagged this 21-pound turkey in Grayson County during the 1976 spring turkey season. The bird had a 9½-inch beard.

The paintings and drawings of Miss Lucile Walton of Danville have enhanced the pages of *Virginia Wildlife's* "In Nature's Garden" page for several years. This fall Dr. Allan A. Hoffman, Commissioner, presented Miss Walton's water color "Autumn Olive" to the Garden Club of Virginia. Pictured are (left to right): Mrs. Landon Wyatt, President of Gabriella Garden Club of Danville, Dr. Allan A. Hoffman, Commissioner, and Mrs. Toy Savage, President of the Garden Club of Virginia. The painting will reside at the Kent-Valentine House in Richmond.

Growing Up Outdoors

Edited by Gail Hackman

CAN A HUMMINGBIRD FLY BACKWARDS? Yes. A hummingbird flies deep into flower tubes, poises there on beating wings while it feeds, and then slips backward out of the flower in a straight reverse flight. What makes the hummingbird so maneuverable? It can turn its wings over.

A squirrel can use its plumy tail as a make-shift parachute. If it falls accidentally, a squirrel can fall 50 to 60 feet to the earth without suffering any injury.

ANIMALS AND THEIR TALES

When chipmunks carry acorns in their cheeks, why don't the nuts' sharp points scratch them? Because a chipmunk neatly nips off acorn tips before stuffing the nuts into its cheek pouches.

Beavers use their tails for three things: as swimmin rudders, to prop themselves up while gnawing trees and to sound alarm signals on the water to warn other beavers of danger.

Philpott:
Virginia's Toughest Lake

Typical view of the cold, clear waters of Philpott Lake.

By BOB GOOCH

"This is Virginia's toughest lake." Coming from the lips of Jimmy Cannoy that statement had the ring of credibility.

We were fishing picturesque Philpott Reservoir deep in the Blue Ridge foothills of Franklin, Henry and Patrick counties. Jimmy, from nearby Collinsville, fishes the lake regularly. Philpott is also the home lake of the Henry County Bassmasters, the oldest bass club in Virginia. Cannoy, a charter member of the club, serves as vice-president. But Jimmy knows the lake well and we were catching bass. "Claytor Lake is the second toughest," he added.

It was a cool, clear morning in early May, the downhill slope of the peak of the spring bass fishing Philpott. Jimmy feels April is the top month on the deep mountain reservoir, but he also likes to fish it in November.

Philpott Lake is one of the oldest of a series of reservoirs along the Roanoke River Basin. Others are Smith Mountain, Leesville, Buggs Island, and Gaston in Virginia and Roanoke Rapids in North Carolina. Both Buggs Island and Gaston straddle the Virginia-North Carolina border.

Philpott, named for the Henry County village of Philpott a few miles downstream from the lake, was authorized as a U. S. Army Corps of Engineers flood control project by the Congress of 1944. Construction of the dam was started in 1948 and completed in 1953.

The sparkling 3,000-acre lake is 15 miles long and boasts a 100-mile winding shoreline that dips in and out of hundreds of deep, narrow coves. The crowns of flooded hills form Deer and Turkey Islands in the broad lower section of the lake.

With a 220-foot dam the lake has many acres of deep water, a major factor contributing to its tough fishing reputation. And draining the forested Blue Ridge Mountains and foothills, the water is crystal clear, another feature that bugs the angler.

We kicked off our fishing that bright spring morning by tossing surface and shallow running lures to one of Jimmy's pet shorelines. "The surface fishing is good this time of year," he said as we worked the forested shoreline, dropping our lures hard by fallen trees, debris and other available cover.

My partner got the first action, a spunky little largemouth bass that leaped clear of the sparkling water and threw the lure. Jimmy hooked and lost several others before I finally got a taste of the action. Somehow I held onto my fish, and a 14-incher went into the live well of Jimmy's bass boat.

Most bass fishermen like slightly colored water, water that conceals them from the fish. This is a condition that rarely exists in clear mountain lakes. Getting within casting range of the fish without spooking them is a major problem and one that contributes to the tough quality of the mountain fishing.

The fish were near the surface that May morning on Philpott, and when they are hitting well on the top they

present no real problems — except for being difficult to approach in the gin-clear water.

The weather can be a help here. For example, a light breeze that ripples the surface breaks up the angler's outline, though the boat may be hard to control in a stiff wind. A light rain can be better as it pelts the surface — again breaking up the angler's outline. Another solution is to fish during the dawn and dusk hours when the visibility is poor — or at night.

The clear water calls for light tackle and thin lines. Longer rods and lighter lines permit longer casts and the light line is less visible to the fish.

Many anglers fish the deep, clear lakes with ultralight tackle and lines in the 4 to 6-pound class as opposed to the 18 to 20-pound lines many bassmen prefer. Also important to mountain lake fishing are lighter lures — 4 to 6-inch plastic worms, and ¼-ounce crank and spinner baits. I found a light Rapala effective on those Philpott bass. Lures should be of subtle colors. Natural finishes are good. The clear water gives the bass an opportunity for a critical look at the lure. Smoke, clear and light blue worms are best in clear water — and they should be small as indicated earlier.

Another key to success in the deep lakes is locating key structure in shallow water — and there is precious little such water. The paucity of shallow water can work to the angler's advantage, however, as it forces the bass to concentrate. "Ninety percent of the water in a mountain lake is no good to a bass," one bassing friend told me.

Jimmy Cannoy and I concentrated our efforts along the shoreline where there is a minimum of shallow water. We didn't try anything else for the simple reason that the action was good near the shore.

Most mountain reservoirs feature small mountain peaks or hills barely covered by the impounded waters, and these usually hold fish. Topographic maps of the lake, or depth finders help the angler locate them.

Cannoy, a vocational teacher in the Henry County school system, likes to fish at night during the hot summer months. Then he prefers such noisy surface lures as jitterbugs, or black worms and spinnerbaits for fishing deep.

In many mountain lakes live minnows or other natural baits produce most of the fish — and often the very largest. While some anglers fish natural baits off the points or permit them to sink slowly along the steep rocky banks, others drift them just above the bottom in water 20 to 30 feet deep.

In addition to minnows, crawfish, spring lizards, salamanders, leeches and grubs of various kinds will take both largemouth and smallmouth bass.

Heavy spring rains often muddy the coves and upper stretches of Philpott and other mountain lakes, and when this happens the bass angler can resort to the methods he is more accustomed to using so successfully in the lowland lakes.

Author Bob Gooch with a stringer of Philpott Lake bass.

While Philpott may be the toughest lake in the state to fish it is probably the best with respect to fishing facilities and accommodations. Both boat docks and ramps are excellent and well spaced. Parking space for automobiles and boat trailers is spacious.

Ramps are located all around the lake from Bowens Creek near the dam to Runnett Bag near the headwaters of the long, narrow lake. The Twin Ridge Marina, a Corps of Engineers Concessionaire, offers boat and motor rentals. There are at least a dozen campgrounds on the lake, most of which are operated by the Corps of Engineers.

Unlike so many flood control reservoirs there is limited draw down of the surface level of Philpott, usually only 2 to 3 feet.

In addition to the approximately 3,000 acres of water which may spread to 4,000 at flood stage, the Corps of Engineers owns approximately 7,000 acres of the surrounding land, most of which is open to hunting and other recreational pursuits.

Jimmy Cannoy and I found the largemouth bass the most cooperative that May day, possibly because we were fishing mostly on the top, but the lake is equally as good for smallmouth bass. In fact the lake gives up few citation largemouth bass, but lunker Philpott smallmouths are conspicuous among the fish entered in the citation program of the Commission of Game and Inland Fisheries. As of this writing a 6-pound, 1-ouncer taken in April holds second place in the 1976 contest.

Philpott also holds good brown and rainbow trout, and trout are stocked annually in the cool mountain waters. Most trout anglers troll deep or fish at night using natural baits. Bluegills, crappie and other panfish round out a rich variety of fishing.

Tough and challenging, but a joy to fish — that's Philpott Lake.

On The Waterfront

Edited by Jim Kerrick

WINTERIZING YOUR BOAT—MOTOR—TRAILER

Now is the time for all skippers to check to insure that all equipment is ready for the off season. If you are storing your rig at home here are a few reminders that could save you money and embarassment.

1. Remove the drain plug so water will not remain in the bottom of the boat.

2. Block up the tongue of your trailer so the bow is higher than the stern.

3. If you cover your boat with a tarp be sure there is a free flow of air throughout the boat.

4. Remove all anchor lines and personal flotation devices from the boat and store them in a dry place.

5. Check the keel of your boat for builtup dirt and grime. If any is evident remove and give the hull a good coating of wax.

6. Check your steering controls and if dry, grease them with an all weather grease.

7. Remove and drain the gasoline tanks from the boat and store them in a dry place. Fixed tanks should be drained.

Add gear lubricant recommended through the filler hole in the lower gear case.

8. Start your motor without hookup to your tanks and run all of the gasoline out of the motor. Contact your marine dealer and obtain an additive that can be put in the motor to keep the motor from freezing up.

9. Be sure that the lower unit of your motor is full of grease.

An occasional coating of corrosion and rust preventive will help keep saltwater corrosion from dulling the finish. The stern drive lower unit is usually underwater all the time the boat is afloat; therefore, it should receive an extra-good coating.

10. Remove the sparkplug wires from the spark plugs.

11. Use touch-up paint to cover any rust spots you may find on your motor housing.

12. Blockup your trailer so the weight of your boat, motor and trailer is not concentrated on the trailer tires.

Lubricate the outboard motor swivel pin with anti-corrosion grease for greater protection from saltwater corrosion.

13. Remove and repack your trailer wheels.

14. Sandpaper and repaint rusted spots on the trailer.

15. Check your electrical wiring on the trailer. If frayed, replace.

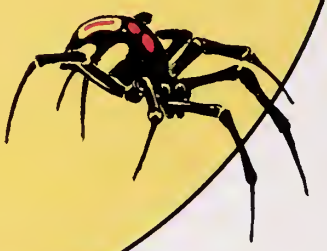
KNOW the GREAT OUTDOORS

by

Enlarged
6 to 8 Times

Although the fear of the BLACK WIDOW spider has in recent years, authorities still consider its bite as or seriously. In 1935, a great scare swept the American Stories were told and printed that brought her a notc deserved. I was a scout-age boy then. When friends would thank their good fortune that this "killer didn area, he delighted in having me show them this she-d them. This is the odd thing about our relationship w gal; few of us realize that most of us have come withi her many, many times.

Immature Female
Enlarged 4 to 6 times

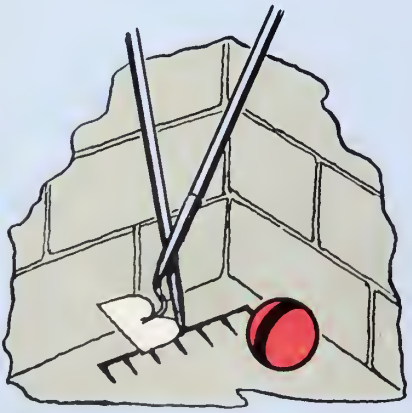


Male
Enlarged 4 to 6 t

The red hour glass on her tummy is her famous identifying mark. Old timers used to say "that's how long she gives you to live." That's not true. If bitten, see a doctor, you may be quite ill but you're not going to die. Probably because we don't look much like an insect, it's even difficult to induce her to bite a human. Miss Muffet could sit down beside her for days and never be bitten.

She's a widow because she eats her husband. The daughter resembles her father until she's mature. The male is much smaller and his bite is believed to be harmless to humans. Spiders are arachnids, not insects.

She may be found in dark cool places from southern Canada southward; more frequently in the south. Look for her. . . .



Look under garden vegetables that lie on the ground.

In the corners and under things in the cellar and out buildings. Look under boards, logs, rocks, objects that lie on the ground.

A fellow who knows the great outdoors never puts his hand where he hasn't first looked.